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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,467	11/19/2003	Luliang Jiang	60282.00312	3763
32294 7590 01/23/2007 SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182			EXAMINER SAEED, USMAAN	
			ART UNIT 2166	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/23/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/715,467	<b>Applicant(s)</b> JIANG, LULIANG	
	<b>Examiner</b> Usmaan Saeed	<b>Art Unit</b> 2166	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Receipt of Applicant's Amendment, filed on 11/03/2006 is acknowledged.  
Claims 1-12, 14-15, and 17-18 have been amended. New claim 19 has been added.

### ***Drawings***

2. The amended description was received on 11/03/2006 and is acceptable to overcome the drawing objections.

### ***Claim Objections***

3. Claim 8 is objected to because of the following informalities: Claim 8 recites "A system comprising" but it depends on claim 5, which recites "the network name resolving element". Further in the arguments applicant indicates that claim 8 is independent claim but in the listing of claims, claim 8 depends on claim 5. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by **Hovell et al.** (**Hovell** hereinafter) (International Publication Number WO 02/073933).

With respect to claim 1, **Hovell** teaches a **network name resolving element for performing name resolving in a network system which includes a first network using a first network protocol and a second network using a second network protocol, the network element comprising:**

**“a name resolving unit configured to perform name resolving”** as means for assigning an alias to a target network device in the first network, the alias being compatible with the communication protocol of the second network (**Hovell** Page 2, Lines 12-14) (**Hovell** Page 5, Lines 18-31).

**“a first connection unit configured to provide a direct connection to the first network”** as providing communication between a network device in a first network and a network device in a second network, where the first network operates in accordance with a first communication protocol and the second network operates in

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accordance with a second communication protocol (**Hovell** Page 2, Lines 8-11) (**Hovell** Figure 1).

**“a second connection unit configured to provide a direct connection to the second network”** as providing communication between a network device in a first network and a network device in a second network, where the first network operates in accordance with a first communication protocol and the second network operates in accordance with a second communication protocol (**Hovell** Page 2, Lines 8-11) (**Hovell** Figure 1).

**“an address translation unit configured to perform address translation between the first network and the second network”** as means for translating said assigned alias to an address for the target network device, said translated address being compatible with the communication protocol of the first network (**Hovell** Page 2, Lines 15-17).

**“wherein the name resolving unit and the address translation unit are configured to co-operate in order to translate addresses upon performing name resolving”** as said assigned alias corresponds to an address of the second means, such that, when a network device in the second network sends one or more communication(s) using an address comprising the assigned alias, the or each communication is routed to the second means, whereupon the second means translates the alias into the address of the target network device in the first network and sends the communication(s) into the first network (**Hovell** Page 2, Lines 19-24).

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Claims 10 and 19 are essentially the same as claim 1 except claim 10, which sets forth the claimed invention as a method and are rejected for the same reasons as applied hereinabove.

With respect to claim 2, **Hovell** teaches **“the network name resolving element according to claim 1, wherein the network element is a domain name service server”** as such processes include the DNS application level gateway (**Hovell** Page 5, Line 26).

Claim 11 is essentially the same as claim 2 except it sets forth the claimed invention as a method and is rejected for the same reasons as applied hereinabove.

With respect to claim 3, **Hovell** teaches **“the network name resolving element according to claim 1, wherein the address translation unit is configured to select a particular network address translating element to be used for a connection between a first host in the first network and a second host in the second network”** as the translator 101 then looks up 306 the mapping between assigned Ipv4 address and Ipv6 address to retrieve the Ipv6 address of host A, and make this 308 the destination address of the packet. For the packets to be routed from the translator 101 to host A, the translator 101 has to modify the source address of the packet, which is the Ipv4 address of node C, into Ipv6 format. This involves expanding 310 the Ipv4

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address of host C with a prefix that is representative of the translator 101 (**Hovell** Page 6, Lines 16-22).

**“wherein the address translation unit is configured to add network address translating element information to the resolved address”** as when an Ipv4 packet arrives at the translator 101 a 96 bit prefix, which is indicative of the translator 101, is added to the source address of the packet (32 bits) to make an Ipv6 address (128 bits) (**Hovell** Page 6, Lines 25-27).

Claim 12 is essentially the same as claim 3 except it sets forth the claimed invention as a method and is rejected for the same reasons as applied hereinabove.

With respect to claim 4, **Hovell** teaches **“the network name resolving element according to claim 3, wherein the network address translating element information is an address prefix”** as an IPv4 source address 10.10.10.10 arriving at the translator 101 could be given the prefix 2001:618:1:2:: so that the source IPv4 host has the following address in the IPv6 world 2001:618:1:2::10.10.10.10. An IPv6 packet sent to this address would go to translator 101 because the prefix 2001:628:1:2:: routes to the translator 101 (**Hovell** Page 6, Lines 28-32).

Claim 13 is essentially the same as claim 4 except it sets forth the claimed invention as a method and is rejected for the same reasons as applied hereinabove.

With respect to claim 5, **Hovell** teaches **“the network name resolving element according to claim 3, wherein the address translation unit is configured to select a network address translating element based on information regarding the load on the network address translating element”** as the selecting means is operable to monitor the device characteristics, so that selection of a device is based on current device performance. Monitored device characteristics include at least one of operational status of device, loading on device, and/or aliases available to the device (**Hovell** Page 3, Lines 8-11).

Claim 14 is essentially the same as claim 5 except it sets forth the claimed invention as a method and is rejected for the same reasons as applied hereinabove.

With respect to claim 6, **Hovell** teaches **“the network element according to claim 1, wherein the first protocol is Internet Protocol version 6, and the second protocol is Internet Protocol version 4”** as a device so identified thereafter deal with all subsequent communication between hosts in IPv6 and IPv4, and the subsequent communication is therefore independent of the controller operations (**Hovell** Page 7, Lines 26-27).

Claim 15 is essentially the same as claim 6 except it sets forth the claimed invention as a method and is rejected for the same reasons as applied hereinabove.



With respect to claim 7, **Hovell** teaches **“the network name resolving element according to claim 1, wherein the name resolving unit of the network element is configured to send a name resolve request to a name resolving element located in the second network”** as means for assigning an alias to a target network device in the first network, the alias being compatible with the communication protocol of the second network (**Hovell** Page 2, Lines 12-14). Assigned alias corresponds to an address of the second means, such that, when a network device in the second network sends one or more communication(s) using an address comprising the assigned alias, the or each communication is routed to the second means, whereupon the second means translates the alias into the address of the target network device in the first network and sends the communication(s) into the first network (**Hovell** Page 2, Lines 19-24).

With respect to claim 8 & 9, **Hovell** teaches **“a system comprising a network name resolving element according to claim 5 and at least two network address translating elements, wherein the network address translating elements are configured to send load information to the network element”** and **“The system according to claim 8, wherein the load information is sent using a Simple Network Management Protocol”** as the controller 401 can derive the loading on a device 403a by issuing simple network management protocol (SNMP) messages to a Management Information Base (MIB) that is maintained on the router (**Hovell** Page 9, Lines 17-19).

Claims 16 & 17 are essentially the same as claim 8 & 9 except they set forth the claimed invention as a method and are rejected for the same reasons as applied hereinabove.

With respect to claim 18, **Hovell** teaches **“the method according to claim 10, wherein the name resolve request processing comprises: forwarding a name resolve request from the first network directly to a network name resolving element in the second network; and receiving an address from the name resolving element in the second network”** as means for assigning an alias to a target network device in the first network, the alias being compatible with the communication protocol of the second network (**Hovell** Page 2, Lines 12-14). Assigned alias corresponds to an address of the second means, such that, when a network device in the second network sends one or more communication(s) using an address comprising the assigned alias, the or each communication is routed to the second means, whereupon the second means translates the alias into the address of the target network device in the first network and sends the communication(s) into the first network (**Hovell** Page 2, Lines 19-24).

### ***Response to Arguments***

5. Applicant's arguments filed on 11/03/2006 have been fully considered but they are not persuasive.

First of all examiner would like to point out that claim 8 is not an independent claim and the limitations provided for claim 8 in the remarks section are not present in claim 8.

Applicant argues that **Hovell** does not teach “**a name resolving unit configured to perform name resolving**” and says that “name resolving used in the presently pending claims clearly indicate that this name resolving unit does not simply assign an address, but resolves the name in order to obtain an address”.

In response to the preceding arguments examiner respectfully submits that **Hovell** teaches “**a name resolving unit configured to perform name resolving**” as means for assigning an alias to a target network device in the first network, the alias being compatible with the communication protocol of the second network (**Hovell** Page 2, Lines 12-14).

Further **Hovell** teaches the address translation is performed by aliasing an IPv6 address with an IPv4 address in much the same way as is done with a conventional Network Address Translation (NAT) device. Some NAT-PT implementations include a DNS Application Level Gateway (DNS\_ALG), which translates DNS requests and responses. Figure 1 shows a conventional implementation of NAT-PT in operation between a first network NW1, which may be an IPv4 network and a second network NW2, which may be an IPv6 network. The implementation includes a single translator

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101, which comprises processes 102 that manage assignment of IPv6/v4 addresses. Such processes 102 include the DNS application level gateway. In addition the translator 101 has access to a pool 103 of IPv4 addresses, which is used for assignment to IPv6 nodes. Figure 1 additionally shows two DNS servers 104, 106, a first 104 of which stores IPv4 name to address mappings in the form of "A" records, and a second 106 of which stores IPv6 name to address mappings in the form of "AAAA" records (Hovell Page 5, Lines 18-31).

Further Examiner would like to point out the definition of DNS from the book "The Web Navigator." It describes DNS as "Domain name system (DNS) is what translates computer names into IP addresses computers can understand. Here's an IP address: 140.147.254.3. And here is the name that corresponds to the numeric address: locis.loc.gov. If I use a Telnet client program, I can enter locis.loc.gov as my destination, and the Domain name system will translate that into a numerical, or IP address. The DNS matches the name to the number."

Further applicant argues that Hovell does not teaches or suggest **"a DNS with network address translation functionality and direct connections to both networks."**

First examiner would like to point out that **"a DNS with network address translation functionality"** is not present in the claims.

In response to the preceding arguments examiner respectfully submits that **Hovell** teaches “**a DNS with network address translation functionality**” as means for assigning an alias to a target network device in the first network, the alias being compatible with the communication protocol of the second network (**Hovell** Page 2, Lines 12-14). The address translation is performed by aliasing an IPv6 address with an IPv4 address in much the same way as is done with a conventional Network Address Translation (NAT) device. Some NAT-PT implementations include a DNS Application Level Gateway (DNS\_ALG), which translates DNS requests and responses. Figure 1 shows a conventional implementation of NAT-PT in operation between a first network NW1, which may be an IPv4 network and a second network NW2, which may be an IPv6 network. The implementation includes a single translator 101, which comprises processes 102 that manage assignment of IPv6/v4 addresses. Such processes 102 include the DNS application level gateway. In addition the translator 101 has access to a pool 103 of IPv4 addresses, which is used for assignment to IPv6 nodes. Figure 1 additionally shows two DNS servers 104, 106, a first 104 of which stores IPv4 name to address mappings in the form of "A" records, and a second 106 of which stores IPv6 name to address mappings in the form of "AAAA" records (**Hovell** Page 5, Lines 18-31). **And “direct connections to both networks”** as providing communication between a network device in a first network and a network device in a second network, where the first network operates in accordance with a first communication protocol and the second network operates in accordance with a second communication protocol (**Hovell** Page 2, Lines 8-11) (**Hovell** Figure 1).

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usmaan Saeed whose telephone number is (571)272-4046. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571)272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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January 10, 2007

  
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